

CLAIM AMENDMENTS

1. (currently amended) A method of determining whether to allow or suppress deployment of a vehicular inflatable restraint for a vehicle occupant based at least in part on an output signal of a sensor responsive to occupant weight applied to a vehicle seat, the method comprising the steps of:

comparing a filtered version of said output signal to a threshold having a default value corresponding to a predetermined occupant weight under a given set of conditions;

measuring a vertical acceleration of the vehicle;

determining a free mass of the vehicle occupant based on a variation of said output signal with respect to a variation of the measured vertical acceleration;

establishing a predetermined range of free mass values corresponding to an average weight occupant;

adjusting said threshold below said default value when the determined value of said free mass is above a the predetermined range of free mass values corresponding to an average weight occupant;

adjusting said threshold above said default value when the determined value of said free mass is below the predetermined range of free mass values;

maintaining a current value of said threshold when the determined value of said free mass is within said predetermined range of free mass values; and

allowing deployment of said restraint when the filtered version of said output signal is above said threshold, and suppressing deployment of said restraint when the filtered version of said output signal is below said threshold.

3. (previously presented) The method of Claim 1, wherein the step of determining a value of said free mass includes the steps of:

sampling output signal values and computing an average of the sampled values;

identifying sampled output signal values that are within a specified percentage of said average;

computing a first variance of the identified output signal values;

computing a second variance of the measured vertical acceleration; and

determining the value of free mass according to a ratio of the first variance and the second variance.

4. (previously presented) The method of Claim 1, including the steps of:
measuring a vehicle run time; and
delaying the step of determining the value of said free mass until the measured run time reaches a predetermined threshold.

5. (previously presented) The method of Claim 1, wherein said vehicle seat is equipped with a seat belt for restraining said occupant, the method including the steps of:
measuring the tension of said seat belt; and
adjusting said threshold above said default value when the measured tension is above a predetermined normal range.

6. (previously presented) The method of Claim 1, including the steps of:
measuring a temperature of the vehicle seat; and
adjusting said threshold below said default value when the measured temperature is below a predetermined normal range.